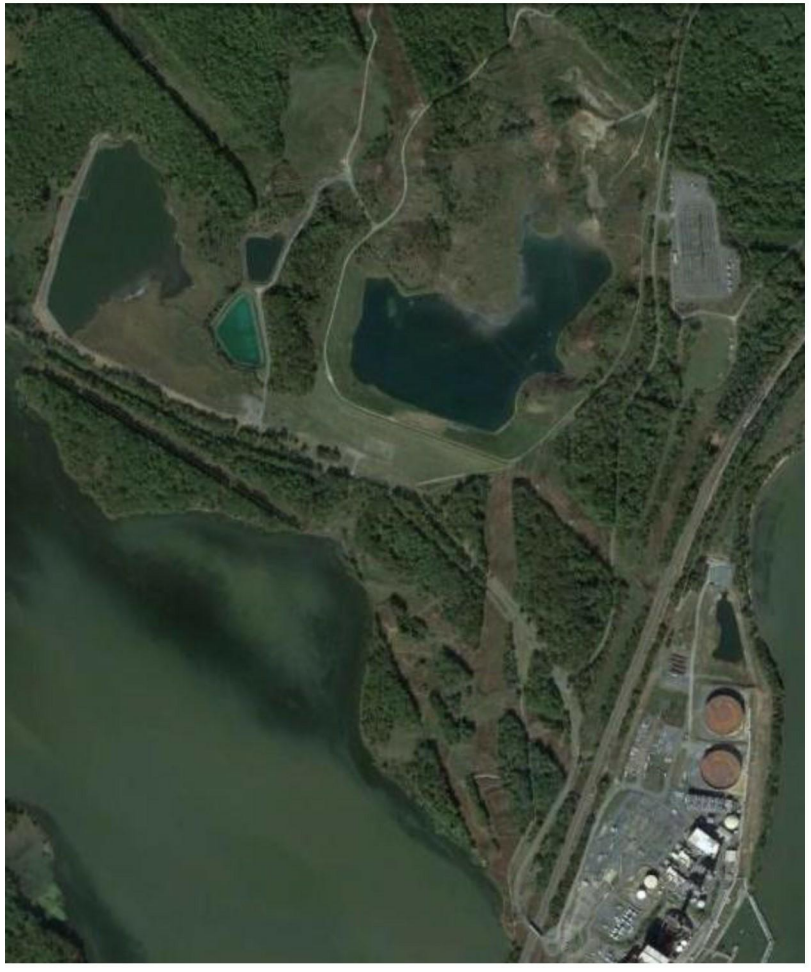
Possum Point and Bremo Power Station Coal Ash Pond Closures Presentation









February 5, 2015

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Presentation Overview

- **Overview of Capabilities and Services**
  - Safety Program
  - Core Service Areas
- **Personnel Resources/Key Project Personnel**
- **Relevant Project Experience**
- **Specific Project Examples**
  - Emphasis on Design-Build
- **Value-Added Services**
- **General Approach**
  - Possum Point Power Station
  - Bremo Power Station
- **Potential Challenges and Mitigations**
  - Regulatory Timeframes
  - Material Handling
  - Borrow Material and Cap Construction
  - Water Treatment

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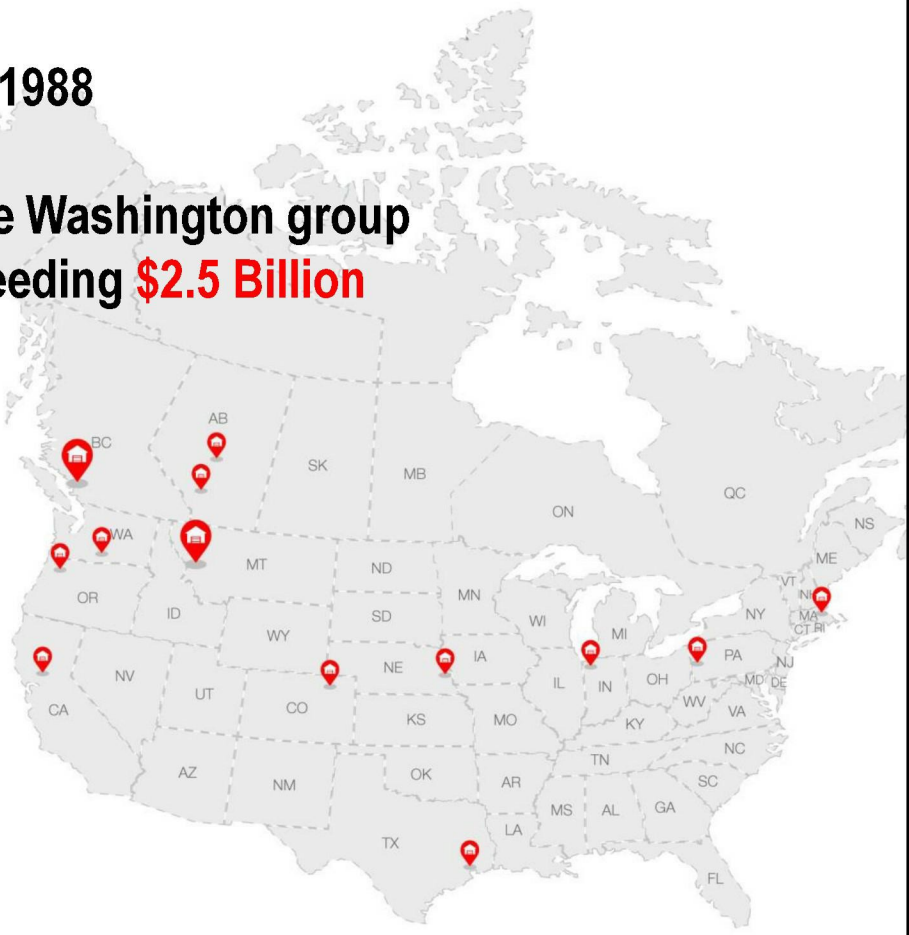
Company Overview

- Environmental remediation, demolition and specialty construction firm with **350+ employees**
- Completion of over **2,800 projects** since 1988
- Excellent financial strength as part of the Washington group of companies with annual revenues exceeding **$2.5 Billion**
- Bonding capacity of **$100 Million**
- Large fleet of owned equipment valued at nearly **$25 Million**
- **13 locations** across North America



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Goal: "Incident-Free Performance" on all projects

Behavior Based Safety Program utilizing:

- Site Specific Health & Safety Plans (HASPs), Activity
- Hazard Analysis (AHAs)
- Daily Tailgate Meetings, Employee Incentives
- Behavior Based Observations, Stop Work Authority

Current Experience Modification Rate (EMR) = 0.57

H&S department includes over 30 professionals focused exclusively on ensuring project safety, including:

- Certified Industrial Hygienists (CIH)
- Certified Safety Professionals (CSP)
- Certified Hazardous Materials Managers (CHMM)
- Construction Health and Safety Technicians (CHST)
- Loss Control, H&S Managers, H&S Supervisors

Core Service Areas

Envirocon's Core Service Areas include:

- Environmental Remediation
- Dredging & Sediment Remediation
- Decontamination, Decommissioning & Demolition
- Geotechnical Construction
- Nuclear & Government Services

Envirocon has handled millions of cubic yards of contaminated soil, sludge, sediment, and hazardous materials.

Our Environmental Remediation capabilities include:

- Soil excavation and materials handling
- Soil and sludge treatment, solidification, and stabilization
- Heavy dewatering of excavated materials
- Repository construction, capping, and containment
- Radiological remediation
- Mine reclamation
- Soil and groundwater remediation systems

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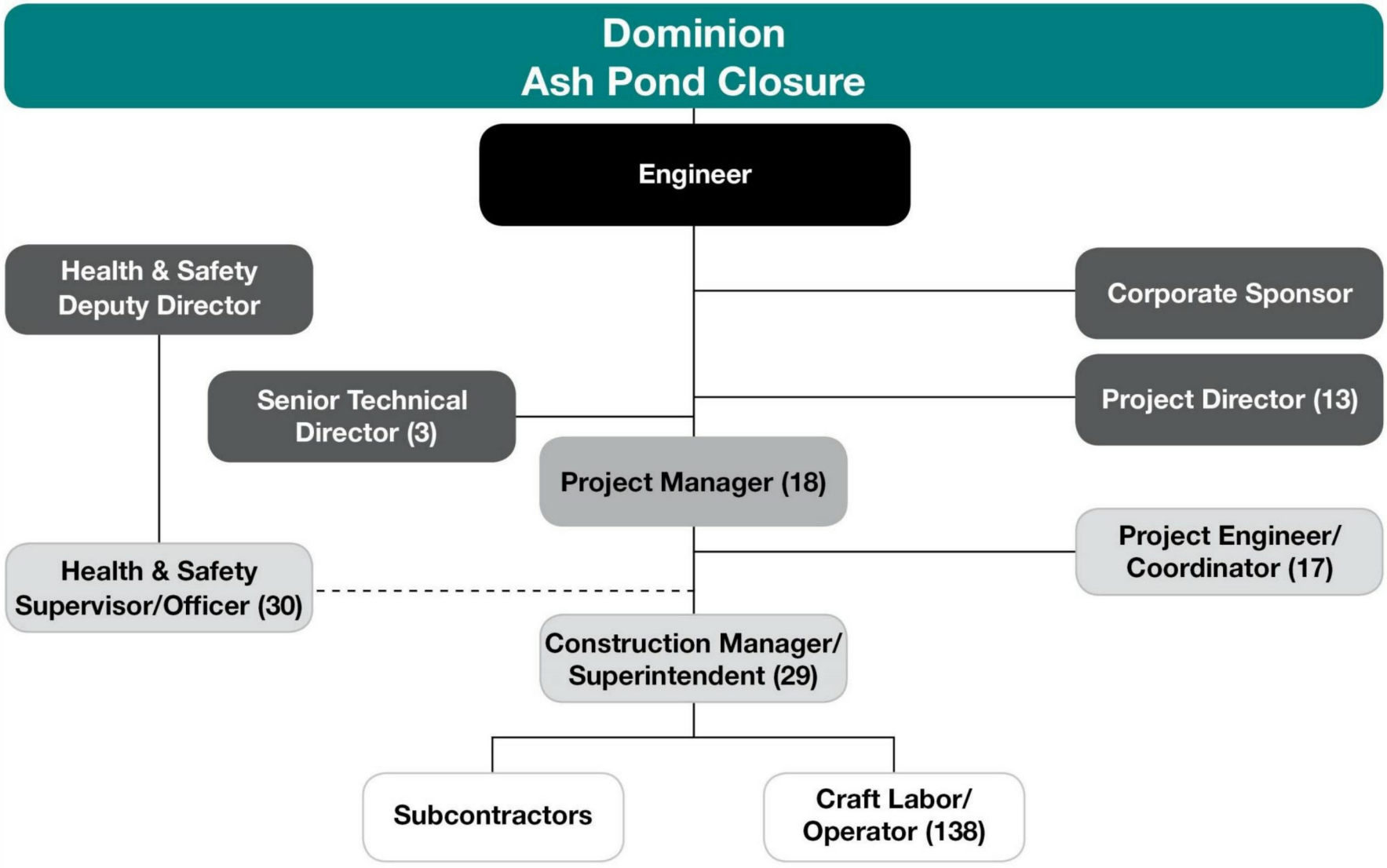
Personnel Resources and Project Management Structure



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Key Personnel Experience

Name and Title	Years of Experience	Coal ash handling	Soil, sludge, & sediment handling	Dewatering of excavated materials	Water treatment system operation	Liner installation	Installation of cap & cover systems
Dr. Paul Lear, Senior Technical Director	29	▪	▪	▪	▪	▪	▪
Michael Fisher, Manager of Geotechnical Services	20	▪	▪	▪	▪	▪	▪
Travis Parker, Project Director	22		▪	▪	▪	▪	▪
Pat Davidson, Project Director	24	▪	▪	▪	▪	▪	▪
Brian Bell, Project Director	30		▪	▪	▪	▪	▪
Alan Buell, Project Director	33		▪	▪	▪	▪	▪
Bruce Culbertson, Project Manager	25	▪	▪	▪	▪	▪	▪
Richard Whitman, Construction Manager	17		▪	▪	▪	▪	▪
Verne Musser, Construction Manager	30		▪	▪	▪	▪	▪
Bert Sparks, Construction Manager	16		▪	▪	▪	▪	▪
Robert Castilaw, Project Superintendent	25		▪	▪	▪	▪	▪

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Relevant Project Experience

Project	Location	In-situ dewatering	Coal tar sediment & ash handling	Cover / capping system	Liner installation
North Lansing Ash Pond Slurry Wall	North Lansing, MI		■	■	
Gypstack 4 – Phase I & II, Gypstack 5 Leachate Underdrain and Closure	Pasadena, TX	■		■	■
Western Refining Phases I & II	Yorktown, VA	■		■	■
Sunburst Refinery Pond Closure	Sunburst, MT	■		■	■
Navassa Site Remediation	Navassa, NC	■		■	■
Chattanooga Creek Remediation	Chattanooga, TN	■	■	■	
Hylebos Waterway Sediment Remediation	Tacoma, WA	■	■	■	
Lagoon (SWMU 22) Closure	Dover, OH		■	■	
Landfill & Pond Closure	Muncie, IN	■		■	
Moab Atlas Tailings	Moab, UT	■		■	
Stauffer Chemical OU-1 Superfund Site	Tarpon Springs, FL	■		■	■
Phosphorus Pond Closure Phase II, III, IV, and V	Pocatello, ID	■	■	■	
21st Street Pond Remediation	Ogden, UT	■	■	■	■
Stryker Bay Sand Cap/Surcharge	Duluth, MN		■	■	
NPDES Ponds Cleanup	Goldendale, WA	■		■	■

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Relevant Project Experience

North Lansing Ash Pond Slurry Wall
Lansing, MI

- Removal and transport of 75,000 cy of coal ash
- Installation of a 413,950 sf soil-bentonite slurry wall around ash pond
- Slurry wall depths ranged from 72 to 103 feet below ground surface
- Construction of a 50-foot wide work platform

Contaminants of Concern	
Arsenic, Selenium, Aluminum, Iron	
Relevance to Ash Pond Closure Work	
✓ Excavation and handling of coal ash	✓ Trench excavation
✓ Large scale earthwork and surface grading	✓ Installation of a trench cap

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Relevant Project Experience

Gypstack 5 Dewater and Cap Project
Pasadena, TX

- Engineer-lead Design/Build Project
- Dewatered top 20 feet of the 300-acre Gypstack 5 with trenches and sumps
- Low pH water was treated and deep well injected
- Solidified, excavated, and transported 185,000 cy of gypsum
- Graded side slopes, amended the surface of the gypstack, and installed sod
- 114,921 manhours worked with incurring a single OSHA recordable incident

Contaminants of Concern	
NORM and pH	
Relevance to Ash Pond Closure Work	
✓Handling a high-moisture thixotropic material	✓Dewatering of excavated material
✓Large scale earthwork and surface grading	✓Liner installation

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Relevant Project Experience

Gypstack 4 Dewater and Cap Project
Pasadena, TX

- Engineer-lead Design/Build project
- Dewatered top 28 feet of the 45-acre Gypstack 4 with trenches and sumps
- Low pH water was treated and deep well injected
- Solidified, excavated, and placed 216,000 cy of gypsum
- Constructed and lined a 90 million gallon holding pond
- Graded side slopes, amended the surface of the gypstack, and installed sod
- 42,711 manhours worked with incurring a single OSHA recordable incident

Contaminants of Concern	
NORM and pH	
Relevance to Ash Pond Closure Work	
✓Handling a high-moisture thixotropic material	✓Dewatering of excavated material
✓Large scale earthwork and surface grading	✓Liner installation

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Relevant Project Experience

Western Refinery Remediation Phase I & II
Yorktown, VA

- Design/Build based on change in conditions
- Excavation, solidification, and placement of 51,000 yards of refinery waste
- Removal, solidification, and transportation of 100,000 cy of liquid and residual petroleum sludge
- Stabilization of 100,000 cy of lagoon sediments
- Construction, cap, and closure of a 5-acre and an 18-acre RCRA Compliant CAMU

Contaminants of Concern	
Ethylbenzene, Napthalene, PCBs, Toluene, Xylene	
Relevance to Ash Pond Closure Work	
✓ Impoundment dredging and mechanical excavation	✓ Dewatering and Solidification of excavated material
✓ Construct CAMU for stabilized waste placement	✓ Construction of a cap and cover system

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Relevant Project Experience

Atlas Uranium Mill Tailings Dewatering and Excavation Project
Moab, UT

- Engineer-lead, Design/Build project
- Trenched and constructed dewatering sumps on uranium tailings surface
- Dewatered in excess of 20 million gallons of water from uranium tailings
- Tailings ranged from sand to slimes that contained up to 85% water
- Water was used for dust control and to condition tailings for land farming
- 4 million tons of uranium mine tailings excavated and transported offsite

Contaminants of Concern	
Uranium, Radium, Acid, Ammonia	
Relevance to Ash Pond Closure Work	
✓ Excavation of mine tailings	✓ Dewatering of excavated material
✓ Large scale earthwork and surface grading	✓ Operation of dust control systems

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Relevant Project Experience

Milltown Dam Sediment Dewatering and Excavation Project

Missoula, MT

- Envirocon-lead, Design/Build Superfund project
- Sediment dewatering accomplished with active and passive techniques
- Passive dewatering included lowering the pool behind the Milltown Dam
- Active dewatering included installing an extensive system of de-watering wells in arsenic impacted sediment
- De-watered 3.6 million gallons per day and a total of 1.3 billion gallons over a year
- Discharged water to Clark Fork River
- Excavation and rail transport of 2.2 million cy of arsenic impacted sediment

Contaminants of Concern	
Arsenic, Iron, Lead, Cadmium, Zinc, Copper	
Relevance to Ash Pond Closure Work	
✓Excavation of contaminated sediments	✓Dewatering of excavated material
✓Large scale earthwork and surface grading	✓Liner installation

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Envirocon's Value Added Services

- Design/Build Projects
- Budgetary Estimates
- Constructability Reviews
- Programmatic Approach to Project Development and Execution. This provides:
  - Multi-phase project scheduling
  - Accurate budget forecasts for multiple phases of work

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Envirocon's Value Added on Design/Build Projects

Project Name	Client	Final Project Value	Value/Engineering Savings
Hudson Refinery Closure	Confidential	$9,000,000	$2,000,000
BP Casper Refinery Closure	BP ARCO	$50,000,000	$10,000,000
Refinery Acid Sludge Stabilization	Texaco	$3,200,000	$1,500,000
Hicksville Radiation Site	GTE	$29,000,000	$5,000,000
West Chicago Radium Removal Action	Kerr McGee	$43,000,000	$31,000,000
Gypstacks 2 Through 5 Closure Project (Ongoing)	ExxonMobil	$35,000,000	$1,000,000
Milltown Dam Demolition/Sediment Removal Superfund Site	BP ARCO	$100,000,000	$25,000,000
Chattanooga Creek Sediment Removal	PRP Committee	$12,000,000	$2,500,000
Frontier Refinery Slurry Wall	Frontier Refinery	$2,600,000	$500,000
Wyoming Refinery Slurry / Cut Off Walls	Wyoming Refining	$579,000	$45,000

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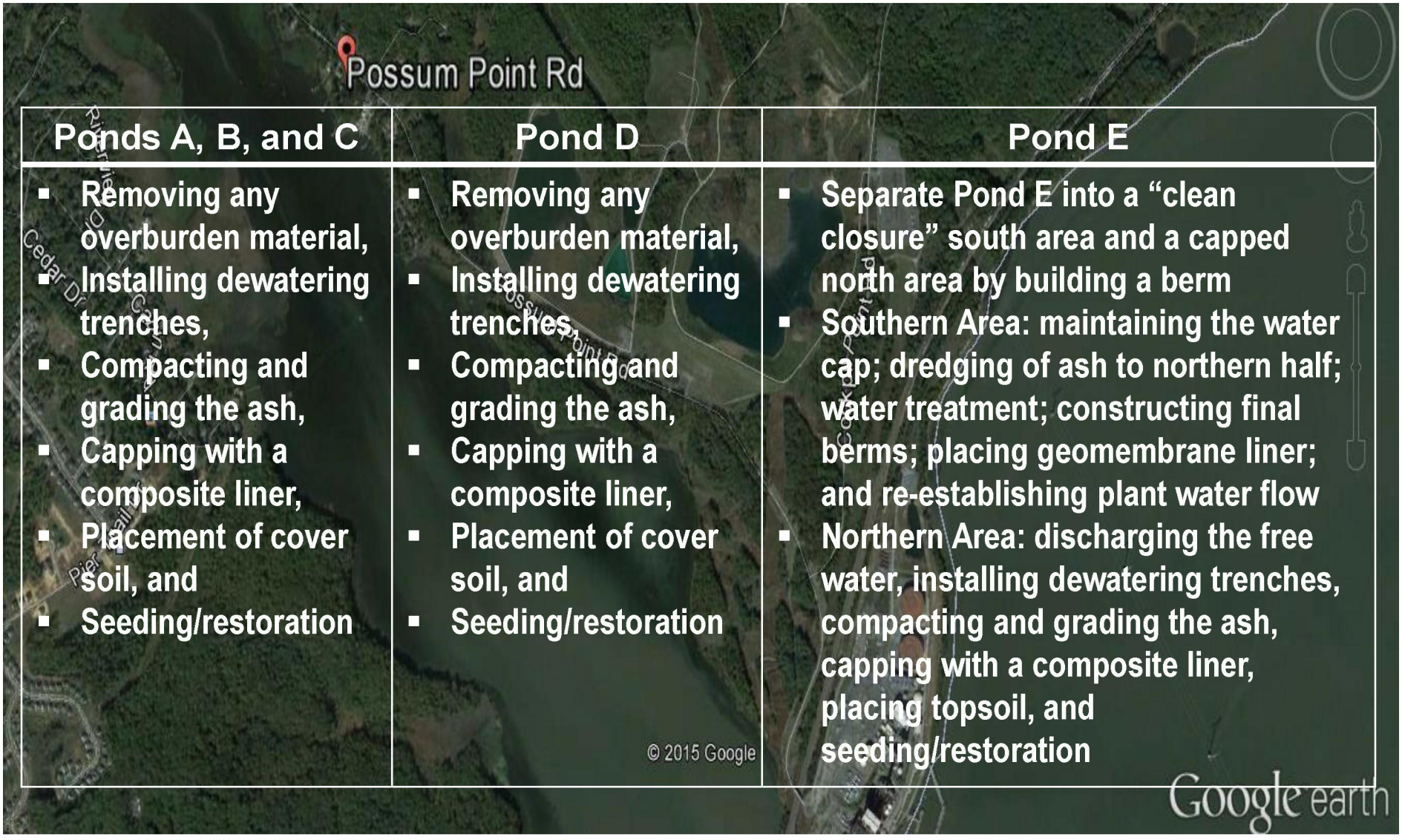
Possum Point General Approach



Ponds A, B, and C	Pond D	Pond E
▪ Removing any overburden material, ▪ Installing dewatering trenches, ▪ Compacting and grading the ash, ▪ Capping with a composite liner, ▪ Placement of cover soil, and ▪ Seeding/restoration	▪ Removing any overburden material, ▪ Installing dewatering trenches, ▪ Compacting and grading the ash, ▪ Capping with a composite liner, ▪ Placement of cover soil, and ▪ Seeding/restoration	▪ Separate Pond E into a “clean closure” south area and a capped north area by building a berm ▪ Southern Area: maintaining the water cap; dredging of ash to northern half; water treatment; constructing final berms; placing geomembrane liner; and re-establishing plant water flow ▪ Northern Area: discharging the free water, installing dewatering trenches, compacting and grading the ash, capping with a composite liner, placing topsoil, and seeding/restoration

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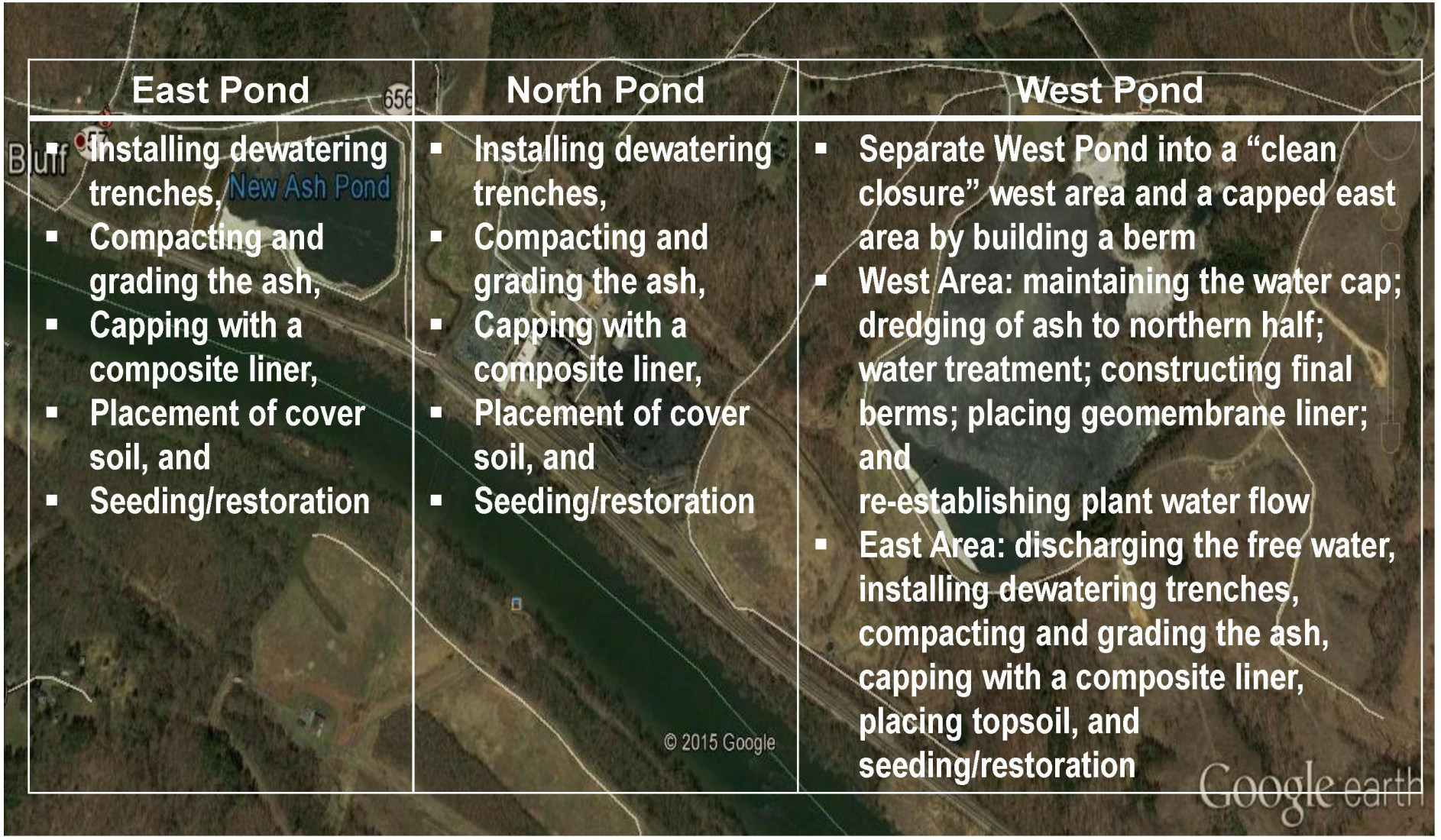
Bremo General Approach



East Pond	North Pond	West Pond
▪ Installing dewatering trenches, ▪ Compacting and grading the ash, ▪ Capping with a composite liner, ▪ Placement of cover soil, and ▪ Seeding/restoration	▪ Installing dewatering trenches, ▪ Compacting and grading the ash, ▪ Capping with a composite liner, ▪ Placement of cover soil, and ▪ Seeding/restoration	▪ Separate West Pond into a “clean closure” west area and a capped east area by building a berm ▪ West Area: maintaining the water cap; dredging of ash to northern half; water treatment; constructing final berms; placing geomembrane liner; and re-establishing plant water flow ▪ East Area: discharging the free water, installing dewatering trenches, compacting and grading the ash, capping with a composite liner, placing topsoil, and seeding/restoration

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Potential Challenges and Mitigation – Regulatory Timeline

CCR Rule has not been published in Federal Register	▪ Planned activities should follow the prepublication CCR rule ▪ Start of design before effective date of CCR Rule gives more time for field implementation
Inactive CCR surface impoundments can not receive CCR materials after effective date	▪ Any necessary movement of CCR between impoundments needs to be done prior to effective date of CCR Rule ▪ Absolutely no transfer of CCR materials between inactive impoundments after effective date
CCR Rule requires closure of inactive impoundments within 36 months of FR publish date	▪ Start of design before effective date of CCR Rule gives more time for field implementation ▪ Provide a knowledgeable and experienced team to develop safe alternatives

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Potential Challenges and Mitigation – Material Handling

Ash material may not support conventional equipment	▪ LGP dozers and/or swamp excavators to conduct initial earthmoving
Slit trenches/sumps may not adequately dewater the ash material	▪ Well point dewatering systems as needed.
Ash material characteristic change over the course of the project	▪ Periodically sample the ash material determine proper moisture/density relationship.
Deposition of suspended solids post-dredging in “clean closure” areas	▪ Scrape the top 6 inches of bottom once the free water has been removed and placed in the non-“clean closed” areas of the pond.
Quiescent settling of the dredge material will require more than 12 hours to reduce suspended solids	▪ Create additional areas for dredge settling in the non-”clean closure” areas of the ash pond. ▪ Provide an experienced project team to develop safe alternative.

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Potential Challenges and Risk Mitigation – Borrow Material

Encountering unanticipated ground water in borrow areas	▪ Dewatering equipment available onsite
Encountering borrow material not meeting specification	▪ Relocate within the borrow area or to an additional borrow area with approval ▪ Relocate within the borrow area or amend if possible
Cap inaccessible to heavy equipment due to excess moisture content in borrow material	▪ LGP ground pressure equipment for initial grading and placement ▪ Mats will be available onsite ▪ Management team with extensive experience and a history of working on projects with similar types of materials
Haul roads not available or inadequate	▪ Improve existing roadways ▪ Build additional haul roads ▪ Provide a knowledgeable and experienced team to develop safe alternative plan

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Potential Challenges and Risk Mitigation – Water Treatment

Quiescent settling for 24 hours does not adequately reduce suspended solids to allow discharge	▪ Add coagulation/flocculation and filtration treatment as needed. ▪ Provide a knowledgeable and experienced team to modify system to meet discharge requirements.
Water treatment system delivery delay	▪ Fast track design effort through in-process design reviews.
Water treatment system large component failure	▪ Deliver water treatment system with minimum critical spare parts inventory. ▪ Perform component reliability analysis during design phase.

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Conclusion – Benefits to Dominion

- Superior Health & Safety culture minimizes risk and exposure; unwavering commitment to safety and quality puts Envirocon at the forefront of the industry
- Extensive equipment, personnel, and financial resources fully dedicated to performing remediation, environmental and construction projects
- Envirocon is part of the Washington Companies, with annual revenues exceeding $2.5B
- Ability to offer turn-key integrated services and successfully execute multiple concurrent projects
- Track record of delivering challenging projects on schedule and on budget
- Provide value-added services and alternative solutions to meet Dominion's business goals
- Innovative contracting that fits Dominion's needs and risk profile

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